

CLAIMS

1. A system for configuring a medical device, comprising:
 - a digital repository populated with entries defining medical device components, the entries each associated with an individual medical device component and having
 - a component identification indicator,
 - a component class indicator, and
 - at least one patient attribute indicator;
 - a processor; and
 - a computer readable medium encoded with processor readable instructions that when executed by the processor implement
 - a practitioner user interface mechanism configured to provide a practitioner with access to entries in the digital repository via a network and to allow the practitioner to provide at least one patient interview answer indicator,
 - a patient interview mechanism configured to receive over the network the at least one patient interview answer indicator corresponding to an attribute of a patient and to store the at least one patient interview answer indicator in a memory, and
 - a configurator mechanism configured to select a subset of entries from the digital repository based on the at least one patient interview answer indicator in the memory, the subset of entries including entries corresponding to individual medical device components of a medical device meeting a need of the patient.
2. The system of Claim 1, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.
3. The system of Claim 1, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a customization mechanism configured to at least one of add, remove, and modify at least one entry of the subset of entries selected by the configurator mechanism, and the practitioner user interface mechanism is further configured to provide access to the customization mechanism.

4. The system of Claim 3, wherein the practitioner user interface mechanism is further configured to provide a summary page of components customized by the customization mechanism.

5. The system of Claim 1, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a medical device shopping mechanism configured to place an order for the medical device and to store order information in the digital repository, and

the practitioner user interface mechanism is further configured to provide access to the medical device shopping mechanism.

6. The system of Claim 5, wherein the medical device shopping mechanism is further configured to determine all applicable price discounts for the medical device available to the practitioner.

7. The system of Claim 1, wherein at least a portion of the practitioner user interface mechanism is accessible via a personal data assistant.

8. The system of Claim 1, wherein at least a portion of the network comprises an Internet protocol based network.

9. The system of Claim 1, wherein at least a portion of the network is the Internet.

10. The system of Claim 1, wherein the digital repository comprises:

a central digital repository, and

a practitioner local digital repository remote from the central database.

11. The system of Claim 10, wherein:

at least one of the practitioner local digital repository and the central digital repository is further populated with patient historical entries, the patient historical entries each associated with an individual patient and having

a patient identification indicator, and

at least one patient history indicator.

12. The system of Claim 11, wherein the at least one patient history indicator comprises information corresponding to a medical device of the individual patient.

13. The system of Claim 12, wherein the information corresponding to a medical device of an individual patient comprises an identification number of a component of the medical device.

14. The system of Claim 11, wherein:

the patient historical entries further have

at least one patient care indicator.

15. The system of Claim 14, wherein the patient care indicator comprises reimbursement information.

16. The system of Claim 15, wherein the reimbursement information comprises an L code indicator.

17. The system of Claim 11, wherein the digital repository is configured to interface with an external system.

18. The system of Claim 17, wherein the external system comprises at least one of a patient management system, a billing system, and an insurance reimbursement system.

19. The system of Claim 1, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a patient letter of necessity generation mechanism configured to generate a letter of necessity for the patient based on information stored in the digital repository and to store the letter of necessity in the digital repository, and

the practitioner user interface mechanism is further configured to provide access to the patient letter of necessity generation mechanism.

20. The system of Claim 1, wherein the digital repository comprises a database.

21. The system of Claim 1, wherein the practitioner user interface is further configured to accept the at least one patient interview answer indicator from an external device.

22. The system of Claim 21, wherein the external device is at least one of a digitizer, a digital camera, and a digital video camera.

23. The system of Claim 1, wherein:

the entries in the digital repository further have a ranking indicator, and

the configurator mechanism is further configured to select a plurality of subsets of entries from the digital repository based on the at least one patient interview answer indicator in the memory, each of the plurality of subsets including entries corresponding to individual medical device components of a medical device meeting the need of the patient and being ranked based on the ranking indicator of the entries.

24. The system of Claim 23, wherein the ranking indicator comprises at least one of a component cost indicator, a component weight indicator, a component height indicator, a component width indicator, a component activity level indicator, and an inventory indicator.

25. The system of Claim 23, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a customization mechanism configured to select one of the plurality of subsets of entries and at least one of add, remove, and modify at least one entry of the one of the plurality of subsets of entries selected by the configurator mechanism, and

the practitioner user interface mechanism is further configured to provide access to the customization mechanism.

26. The system of Claim 25, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a medical device shopping mechanism configured to place an order for the medical device corresponding to the one of the plurality of subsets of entries selected by the customization mechanism and to store order information in the digital repository, and

the practitioner user interface mechanism is further configured to provide access to the medical device shopping mechanism.

27. The system of Claim 25, wherein the practitioner user interface mechanism is further configured to provide a summary page of components customized by the customization mechanism.

28. The system of Claim 1, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a catalog mechanism configured to select a subset of entries from the digital repository based on a query and to provide the subset of entries to the practitioner user interface mechanism, and

a medical device component shopping mechanism configured to place an order for a medical device component corresponding to at least one selected entry of the subset of entries and to store order information in the digital repository

the practitioner user interface mechanism is further configured to accept the query from a user, to provide the query to the catalog mechanism, and to select the at least one selected entry of the subset of entries provided by the catalog mechanism.

29. The system of Claim 28, wherein:

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implement

a customization mechanism configured to select at least one of the subsets of entries and at least one of add, remove, and modify at least one entry of the one of the plurality of subsets of entries selected by the catalog mechanism, and

the practitioner user interface mechanism is further configured to provide access to the customization mechanism.

30. The system of Claim 29, wherein the practitioner user interface mechanism is further configured to provide a summary page of components customized by the customization mechanism.

31. A method for configuring a medical device, comprising the steps of:

populating a digital repository with information corresponding to a plurality of medical device components;

interviewing a patient having a need for a medical device to determine at least one patient attribute;

storing the at least one patient attribute in a memory; and

querying the digital repository for a subset of medical device components based on the at least one patient attribute, the subset of medical device components corresponding to a medical device meeting the need of the patient.

32. The method of Claim 31, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

33. The method of Claim 31, further comprising the step of:
customizing at least one of the subset of medical device components to create a customized medical device further meeting the need of the patient.

34. The method of Claim 31, wherein the querying step comprises:
querying the digital repository for a plurality of subsets of medical device components based on the at least one patient attribute, the subset of medical device components corresponding to a medical device meeting the need of the patient; and
ranking the plurality of subsets based on a ranking criteria.

35. The method of Claim 34, wherein the ranking criteria is at least one of a weight of the medical device, a height of the medical device, a width of the medical device, a cost of the medical device, an activity level supported by the medical device, and an inventory status of the medical device.

36. The method of Claim 34, further comprising the step of:

selecting one of the plurality of subsets;
customizing the one of the plurality of subsets to create a customized medical device further meeting the need of the patient; and
ordering the customized medical device.

37. The method of Claim 36, wherein the ordering step comprises reviewing the customized medical device prior to ordering.

38. The method of Claim 36, wherein the ordering step comprises determining all applicable price discounts for the medical device for the practitioner.

39. The method of Claim 31, wherein the interviewing step comprises entering the at least one patient attribute via at least one of a personal data assistant, a digitizer, a digital camera, and a digital video camera.

40. A method for outsourcing the fabrication of a medical device, comprising the steps of:

populating a digital repository with information corresponding to a plurality of medical device components;

interviewing a patient having a need for a medical device to determine at least one patient attribute;

measuring a body part of the patient and producing a digital map of the body part; and

querying the digital repository by a supplier for a subset of medical device components based on the at least one patient attribute, the subset of medical device components corresponding to a medical device meeting the need of the patient.

41. The method of Claim 40, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

42. The method of Claim 40, further comprising the step of:
sending the at least one patient attribute and the digital map to the supplier over a digital communication link.

43. The method of Claim 40, further comprising the step of:
customizing the medical device by the supplier based on the digital map to produce a customized medical device.

44. The method of Claim 42, wherein at least a portion of the digital communication link comprises the Internet.

45. The method of Claim 42, further comprising the step of:
shipping the customized medical device to the practitioner.

46. A system for configuring a medical device, comprising:
means for populating a digital repository with information corresponding to a plurality of medical device components;
means for interviewing a patient having a need for a medical device to determine at least one patient attribute;
means for storing the at least one patient attribute in a memory; and
means for querying the digital repository for a subset of medical device components based on the at least one patient attribute, the subset of medical device components corresponding to a medical device meeting the need of the patient.

47. The system of Claim 46, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

48. The system of Claim 46, further comprising:

means for customizing at least one of the subset of medical device components to create a customized medical device further meeting the need of the patient.

49. The system of Claim 46, further comprising:

means for determining applicable discounts for the medical device for the practitioner.

50. A computer program product, comprising:

a computer storage medium and a computer program code mechanism embedded in the computer storage medium for causing a processor to facilitate the management of a digital workflow, the computer program code mechanism having

a first computer code device configured to populate a digital repository with data that is descriptive of components of a medical device,

a second computer code device configured to collect patient information and to store patient specific information in a memory, and

a third computer code device configured to select a subset of components stored in the digital repository based on the patient specific information so as to configure a medical device meeting a need of a particular patient.

51. The computer program product of Claim 50, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

52. The computer program product of Claim 50, wherein:

the first computer code device is further configured to populate ranking information associated with the components of a medical device in the digital repository corresponding to a ranking criteria; and

the third computer code device is further configured to select a plurality of subsets of components stored in the digital repository based on the patient specific information and to rank the plurality of subsets based on the ranking criteria so as to configure a plurality of medical devices meeting the need of a particular patient.

53. The computer program product of Claim 50, further comprising:

a fourth computer code device configured to customize at least one component of the subset of components selected by the third computer code device.

54. The computer program product of Claim 52, further comprising:

a fourth computer code device configured to customize at least one component of one of the plurality of subsets of components selected by the third computer code device.

55. The computer program product of Claim 50, further comprising:

a fourth computer code device configured to accept an order for the medical device over a digital communication link.

56. The computer program product of Claim 55, wherein at least a portion of the digital communication link is the Internet.

57. The computer program product of Claim 50, wherein:

the second computer code device is further configured to store the patient specific information in the memory over a digital communication link.

58. The computer program product of Claim 57, wherein at least a portion of the digital communication link is the Internet.

59. The computer program product of Claim 50, wherein:

the second computer code device is further configured to collect patient information via at least one of a personal data assistant, a personal computer, a digitizer, a digital camera, and a digital video camera.

60. The computer program product of Claim 50, further comprising:

a fourth computer code device configured to provide an interface to an external system, wherein

the first computer code device is further configured to populate patient historical information associated with a particular patient.

61. The computer program product of Claim 59, wherein the patient historical information comprises an identification number of a component of a medical device of the patient.

62. The computer program product of Claim 60, wherein:
the patient historical information comprises patient care information, and
the external system comprises at least one of a patient management system, a billing system, and an insurance reimbursement system.

63. The computer program product of Claim 62, wherein the patient care information comprises at least one of reimbursement information and L code information.

64. The computer program product of Claim 55, wherein the fourth computer code device is further configured to determine applicable discounts for the medical device for the practitioner.

65. A method for configuring a medical device, comprising the steps of:
populating a digital repository with information corresponding to a plurality of medical device components;
populating the digital repository with patient historical information associated with a patient;
interviewing the patient having a need for a medical device to determine at least one patient attribute;

storing the at least one patient attribute in a memory via a digital communication link;
querying the digital repository for a subset of medical device components based on
the at least one patient attribute, the subset of medical device components corresponding to a
medical device meeting the need of the patient;

ordering the medical device over the digital communication link; and
storing information corresponding to the medical device in the digital repository
associated with the patient.

66. The method of Claim 65, wherein the medical device comprises at least one of a
lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity
orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

67. The method of Claim 65, wherein the patient historical information comprises at
least one of reimbursement information and L code information

68. The method of Claim 65, further comprising the step of:
sharing information in the digital repository with an external system.

69. The method of Claim 68, wherein the external system comprises at least one of a
patient management system a billing system, and an insurance reimbursement system.

70. A system for collecting data for use in configuring a medical device, comprising:
a digital repository populated with entries defining patient interview questions, the
entries each associated with a medical device type and having

a medical device type indicator, and

at least one patient interview question indicator;

a processor; and

a computer readable medium encoded with processor readable instructions that when
executed by the processor implement

a patient interview mechanism configured to
provide a practitioner with access to entries in the digital repository,
allow the practitioner to provide at least one patient interview answer
indicator corresponding to a patient interview question, and
store the at least one patient interview answer in a memory.

71. The system of Claim 70, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

72. The system of Claim 70, wherein at least a portion of the patient interview mechanism is accessible via a personal data assistant.

73. The system of Claim 70, wherein the digital repository comprises a database.

74. The system of Claim 70, wherein the patient interview mechanism is further configured to accept the at least one patient interview answer indicator from an external device.

75. The system of Claim 74, wherein the external device is at least one of a digitizer, a digital camera, and a digital video camera.

76. A method for collecting data for use in configuring a medical device, comprising the steps of:

populating a digital repository with information corresponding to a plurality of patient questions related to configuring a medical device;

interviewing a patient having a need for a medical device to determine at least one patient attribute; and

storing the at least one patient attribute in a memory.

77. The method of Claim 76, wherein the interviewing step comprises inputting the at least one patient attribute via a personal data assistant.

78. The method of Claim 76, wherein the interviewing step comprises entering the at least one patient attribute via at least one of a digitizer, a digital camera, and a digital video camera.

79. The method of Claim 76, wherein the medical device comprises at least one of a lower extremity prosthetic device, an upper extremity prosthetic device, a lower extremity orthotic device, an upper extremity orthotic device, and a spinal orthotic device.

80. The system of Claim 3, wherein:

the customization mechanism is further configured to store a customization result in the digital repository indicating a change made to the subset of entries selected by the configurator mechanism, and

the computer readable medium is further encoded with processor readable instructions that when executed by the processor further implements

an algorithm adjustment mechanism configured to adjust an algorithm of the configurator mechanism based on the customization result stored in the digital repository, the adjustment causing the configurator mechanism to select a different subset of entries based on the at least one patient interview answer indicator.

81. The system of Claim 80, wherein the algorithm adjustment mechanism comprises an application of artificial intelligence.

82. The method of Claim 31, further comprising the steps of:

customizing at least one of the subset of medical device components to create a customized medical device further meeting the need of the patient;

storing a customization result of the customizing step in the digital repository;

comparing the customization result to the subset of medical device components to identify a customization trend; and

adjusting an algorithm used in the querying step based on the customization trend causing a different subset of medical device components to be queried based on the at least one patient attribute.

83. The computer program product of Claim 53, further comprising:

a fifth computer code device configured to adjust an algorithm of the third computer code device based on a result of the fourth computer code device, the adjustment causing the third computer code device to select a different subset of components based on the patient specific information.

84. The computer program product of Claim 83, wherein the result of the fourth computer code device is stored in the digital repository.

85. The computer program product of Claim 83, wherein the fifth computer code device comprises an application of artificial intelligence.